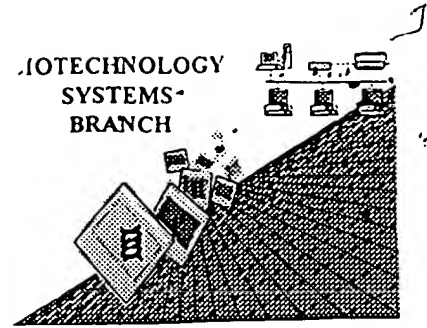


0590
1011

BIOTECHNOLOGY
SYSTEMS-
BRANCH



RAW SEQUENCE LISTING ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 09/759,130A
Source: OIP
Date Processed by STIC: 10/4/2001

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.

PATENTIN 2.1 e-mail help: patin21help@uspto.gov or phone 703-306-4119 (R. Wax)

PATENTIN 3.0 e-mail help: patin3help@uspto.gov or phone 703-306-4119 (R. Wax)

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 3.0 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW:

Checker Version 3.0

The Checker Version 3.0 application is a state-of-the-art Windows based software program employing a logical and intuitive user-interface to check whether a sequence listing is in compliance with format and content rules. Checker Version 3.0 works for sequence listings generated for the original version of 37 CFR §§1.821 - 1.825 effective October 1, 1990 (old rules) and the revised version (new rules) effective July 1, 1998 as well as World Intellectual Property Organization (WIPO) Standard ST.25.

Checker Version 3.0 replaces the previous DOS-based version of Checker, and is Y2K-compliant. Checker allows public users to check sequence listings in Computer Readable form (CRF) before submitting them to the United States Patent and Trademark Office (USPTO). Use of Checker prior to filing the sequence listing is expected to result in fewer errored sequence listings, thus saving time and money.

Checker Version 3.0 can be down loaded from the USPTO website at the following address:

<http://www.uspto.gov/web/offices/pac/checker>

OIPE

RAW SEQUENCE LISTING

DATE: 10/04/2001

PATENT APPLICATION: US/09/759,130A

TIME: 13:00:32

Input Set : A:\10147-61.app

Output Set: N:\CRF3\10042001\I759130A.raw

Does Not Comply
Corrected Diskette Needed*pr 4, 5, 8*

3 <110> APPLICANT: MCCARTHY, Sean A
 4 FRASER, Christopher C
 5 SHARP, John D
 6 BARNES, Thomas S
 7 KIRST, Susan J
 8 MACKAY, Charles R
 9 MYERS, Paul S
 10 LEIBY, Kevin R
 11 WRIGHTON, Nicholas
 12 GOODEARL, Andrew
 13 HOLTZMAN, Douglas A
 15 <120> TITLE OF INVENTION: NOVEL GENES ENCODING PROTEINS HAVING PROGNOSTIC,
 16 DIAGNOSTIC, PREVENTIVE, THERAPEUTIC, AND OTHER USES
 18 <130> FILE REFERENCE: 210147.0066/66US
 20 <140> CURRENT APPLICATION NUMBER: US/09/759,130A
 21 <141> CURRENT FILING DATE: 2001-01-19
 23 <150> PRIOR APPLICATION NUMBER: US 09/479,249
 24 <151> PRIOR FILING DATE: 2000-01-07
 26 <150> PRIOR APPLICATION NUMBER: US 09/559,497
 27 <151> PRIOR FILING DATE: 2000-04-27
 29 <150> PRIOR APPLICATION NUMBER: US 09/578,063
 30 <151> PRIOR FILING DATE: 2000-05-24
 32 <150> PRIOR APPLICATION NUMBER: US 09/333,159
 33 <151> PRIOR FILING DATE: 1999-06-14
 35 <150> PRIOR APPLICATION NUMBER: US 09/596,194
 36 <151> PRIOR FILING DATE: 2000-07-14
 38 <150> PRIOR APPLICATION NUMBER: US 09/342,364
 39 <151> PRIOR FILING DATE: 1999-06-29
 41 <150> PRIOR APPLICATION NUMBER: US 09/608,452
 42 <151> PRIOR FILING DATE: 2000-06-30
 44 <150> PRIOR APPLICATION NUMBER: US 09/393,996
 45 <151> PRIOR FILING DATE: 1999-09-10
 47 <150> PRIOR APPLICATION NUMBER: US 09/602,871
 48 <151> PRIOR FILING DATE: 2000-06-23
 50 <150> PRIOR APPLICATION NUMBER: US 09/420,707
 51 <151> PRIOR FILING DATE: 1999-10-19
 53 <160> NUMBER OF SEQ ID NOS: 460
 55 <170> SOFTWARE: PatentIn Ver. 2.1

ERRORED SEQUENCES

216 <210> SEQ ID NO: 3
 217 <211> LENGTH: 1151 *911 (p. 4)*
 218 <212> TYPE: PRT
 219 <213> ORGANISM: Homo sapiens
 221 <400> SEQUENCE: 3

RAW SEQUENCE LISTING DATE: 10/04/2001
 PATENT APPLICATION: US/09/759,130A TIME: 13:00:32

Input Set : A:\10147-61.app
 Output Set: N:\CRF3\10042001\I759130A.raw

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222 Met His Gln Met Asn Ala Lys Met His Phe Arg Phe Val Phe Ala Leu
223   1           5           10           15
225 Leu Ile Val Ser Phe Asn His Asp Val Leu Gly Lys Asn Leu Lys Tyr
226           20           25           30
228 Arg Ile Tyr Glu Glu Gln Arg Val Gly Ser Val Ile Ala Arg Leu Ser
229           35           40           45
231 Glu Asp Val Ala Asp Val Leu Leu Lys Leu Pro Asn Pro Ser Thr Val
232           50           55           60
234 Arg Phe Arg Ala Met Gln Arg Gly Asn Ser Pro Leu Leu Val Val Asn
235   65           70           75           80
237 Glu Asp Asn Gly Glu Ile Ser Ile Gly Ala Thr Ile Asp Arg Glu Gln
238           85           90           95
240 Thr Leu Pro Thr Glu His Leu Gln Leu Phe His Ile Glu Val Glu Val
241           100          105          110
243 Leu Asp Ile Asn Asp Asn Ser Pro Gln Phe Ser Arg Ser Leu Ile Pro
244           115          120          125
246 Ile Glu Ile Ser Glu Ser Ala Ala Val Gly Thr Arg Ile Pro Leu Asp
247           130          135          140
249 Ser Ala Phe Asp Pro Asp Val Gly Glu Asn Ser Leu His Thr Tyr Ser
250  145          150          155          160
252 Leu Ser Ala Asn Asp Phe Phe Asn Ile Glu Val Arg Thr Arg Thr Asp
253           165          170          175
255 Glu Leu Lys Ser Ser Tyr Glu Leu Gln Leu Thr Ala Ser Asp Met Gly
256           180          185          190
258 Val Pro Gln Arg Ser Gly Ser Ser Ile Leu Lys Ile Ser Ile Ser Asp
259           195          200          205
261 Ser Asn Asp Asn Ser Pro Ala Phe Glu Gln Gln Ser Tyr Ile Ile Gln
262           210          215          220
264 Leu Leu Glu Asn Ser Pro Val Gly Thr Leu Leu Asp Leu Asn Ala
265  225          230          235          240
267 Thr Asp Pro Asp Glu Gly Ala Asn Gly Lys Ile Val Tyr Ser Phe Ser
268           245          250          255
270 Ser His Val Ser Pro Lys Ile Met Glu Thr Phe Lys Ile Asp Ser Glu
271           260          265          270
273 Lys Ser Tyr Glu Ile Asp Val Gln Ala Gln Asp Leu Gly Pro Asn Ser
274           275          280          285
276 Ile Pro Ala His Cys Lys Ile Ile Ile Lys Val Val Asp Val Asn Asp
277           290          295          300
279 Asn Lys Pro Glu Ile Asn Ile Asn Leu Met Ser Pro Gly Lys Glu Glu
280  305          310          315          320
282 Ile Ser Tyr Ile Phe Glu Gly Asp Pro Ile Asp Thr Phe Val Ala Leu
283           325          330          335
285 Val Arg Val Gln Asp Lys Asp Ser Gly Leu Asn Gly Glu Ile Val Cys
286           340          345          350
288 Asn Asn Tyr Leu Ile Leu Thr Asn Ala Thr Leu Asp Arg Glu Lys Arg
289           355          360          365
291 Ser Glu Tyr Ser Leu Thr Val Ile Ala Glu Asp Arg Gly Thr Pro Ser
292           370          375          380
294 Leu Ser Thr Val Lys His Phe Thr Val Gln Ile Asn Asp Ile Asn Asp

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RAW SEQUENCE LISTING

DATE: 10/04/2001

PATENT APPLICATION: US/09/759,130A

TIME: 13:00:32

Input Set : A:\10147-61.app

Output Set: N:\CRF3\10042001\I759130A.raw

```

295 385          390          395          400
297 Asn Pro Pro His Phe Gln Arg Ser Arg Tyr Glu Phe Val Ile Ser Glu
298          405          410          415
300 Asn Asn Ser Pro Gly Ala Tyr Ile Thr Thr Val Thr Ala Thr Asp Pro
301          420          425          430
303 Phe Ile Leu Gly Ser Ser Ile Thr Thr Tyr Val Thr Ile Asp Pro Ser
304          435          440          445
306 Asn Gly Ala Ile Tyr Ala Leu Arg Ile Phe Asp His Glu Glu Val Ser
307          450          455          460
309 Gln Ile Thr Phe Val Val Glu Ala Arg Asp Gly Gly Ser Pro Lys Gln
310 465          470          475          480
312 Leu Val Ser Asn Thr Thr Val Val Leu Thr Ile Ile Asp Glu Asn Asp
313          485          490          495
315 Asn Val Pro Val Val Ile Gly Pro Ala Leu Arg Asn Asn Thr Ala Glu
316          500          505          510
318 Ile Thr Ile Pro Lys Gly Ala Glu Ser Gly Phe His Val Thr Arg Ile
319          515          520          525
321 Ala Ile Val Ala Gly Asn Glu Glu Asn Ile Phe Ile Ile Asp Pro Arg
322          530          535          540
324 Ser Cys Asp Ile His Thr Asn Val Ser Met Asp Ser Val Pro Tyr Thr
325 545          550          555          560
327 Glu Trp Glu Leu Ser Val Ile Ile Gln Asp Lys Gly Asn Pro Gln Leu
328          565          570          575
330 His Thr Lys Val Leu Leu Lys Cys Met Ile Phe Glu Tyr Ala Glu Ser
331          580          585          590
333 Val Thr Ser Thr Ala Met Thr Ser Val Ser Gln Ala Ser Leu Asp Val
334          595          600          605
336 Leu Val Ile Met Val Leu Phe Ala Thr Arg Cys Asn Arg Glu Lys Lys
337          610          615          620
339 Asp Thr Arg Ser Tyr Asn Cys Arg Val Ala Glu Ser Thr Tyr Gln His
340 625          630          635          640
342 His Pro Lys Arg Pro Ser Arg Gln Ile His Lys Gly Asp Ile Thr Leu
343          645          650          655
345 Val Pro Thr Ile Asn Gly Thr Leu Pro Ile Arg Ser His His Arg Ser
346          660          665          670
348 Ser Pro Ser Ser Ser Pro Thr Leu Glu Arg Gly Gln Met Gly Ser Arg
349          675          680          685
351 Ser Ser Asn His Val Pro Glu Asn Phe Ser Leu Glu Leu Thr His Ala
352          690          695          700
354 Thr Pro Ala Val Glu Gln Val Ser Gln Leu Leu Ser Met Leu His Gln
355 705          710          715          720
357 Gly Gln Tyr Gln Pro Arg Pro Ser Phe Arg Gly Asn Lys Tyr Ser Arg
358          725          730          735
360 Ser Tyr Arg Tyr Ala Leu Gln Asp Met Asp Lys Phe Ser Leu Lys Asp
361          740          745          750
363 Ser Gly Arg Gly Asp Ser Glu Ala Gly Asp Ser Asp Tyr Asp Leu Gly
364          755          760          765
366 Arg Asp Ser Pro Ile Asp Arg Leu Leu Gly Glu Gly Phe Ser Asp Leu
367          770          775          780

```

RAW SEQUENCE LISTING

DATE: 10/04/2001

PATENT APPLICATION: US/09/759,130A

TIME: 13:00:32

Input Set : A:\10147-61.app

Output Set: N:\CRF3\10042001\I759130A.raw

```

369 Glu Glu Cys Arg Val Leu Gly His Ser Asp Gln Cys Trp Met Pro Pro
370 785          790          795          800
372 Leu Pro Ser Pro Ser Ser Asp Tyr Arg Ser Asn Met Phe Ile Pro Gly
373          805          810          815
375 Glu Glu Phe Pro Thr Gln Pro Gln Gln Gln His Pro His Gln Ser Leu
376          820          825          830
378 Glu Asp Asp Ala Gln Pro Ala Asp Ser Gly Glu Lys Lys Lys Ser Phe
379          835          840          845
381 Ser Thr Phe Gly Lys Asp Ser Pro Asn Asp Glu Asp Thr Gly Asp Thr
382          850          855          860
384 Val Asp Arg Ser Asn Ser Leu Glu Arg Arg Lys Gly Pro Leu Pro Ala
385 865          870          875          880
387 Glu Glu Ile Pro Glu Asn Tyr Glu Glu Asp Asp Phe Asp Asn Val Leu
388          885          890          895
390 Leu Val Ala Glu Ile Asn Lys Leu Leu Gln Asp Val Arg Gln Ser
E--> 391          900          905          910 ←
1579 <210> SEQ ID NO: 38
1580 <211> LENGTH: (425) 295 (p.5)
1581 <212> TYPE: PRT
1582 <213> ORGANISM: Homo sapiens
1584 <400> SEQUENCE: 38
1585 Ala Thr Arg Cys Asn Arg Glu Lys Lys Asp Thr Arg Ser Tyr Asn Cys
1586 1          5          10          15
1588 Arg Val Ala Glu Ser Thr Tyr Gln His His Pro Lys Arg Pro Ser Arg
1589          20          25          30
1591 Gln Ile His Lys Gly Asp Ile Thr Leu Val Pro Thr Ile Asn Gly Thr
1592          35          40          45
1594 Leu Pro Ile Arg Ser His His Arg Ser Ser Pro Ser Ser Pro Thr
1595          50          55          60
1597 Leu Glu Arg Gly Gln Met Gly Ser Arg Gln Ser His Asn Ser His Gln
1598 65          70          75          80
1600 Asn Phe Ser Leu Glu Leu Thr His Ala Thr Pro Ala Val Glu Val Ser
1601          85          90          95
1603 Gln Leu Leu Ser Met Leu His Gln Gly Gln Tyr Gln Pro Arg Pro Ser
1604          100          105          110
1606 Phe Arg Gly Asn Lys Tyr Ser Arg Ser Tyr Arg Tyr Ala Leu Gln Asp
1607          115          120          125
1609 Met Asp Lys Phe Ser Leu Lys Asp Ser Gly Arg Gly Asp Ser Glu Ala
1610          130          135          140
1612 Gly Asp Ser Asp Tyr Asp Leu Gly Arg Asp Ser Pro Ile Asp Arg Leu
1613 145          150          155          160
1615 Pro Ala Ala Met Arg Leu Cys Thr Glu Glu Cys Arg Val Leu Gly His
1616          165          170          175
1618 Ser Asp Gln Cys Trp Met Pro Pro Leu Pro Ser Pro Ser Ser Asp Tyr
1619          180          185          190
1621 Arg Ser Asn Met Phe Ile Pro Gly Glu Glu Phe Pro Thr Gln Pro Gln
1622          195          200          205
1624 Gln Gln His Pro His Gln Ser Leu Glu Asp Asp Ala Gln Pro Ala Asp
1625          210          215          220

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RAW SEQUENCE LISTING

DATE: 10/04/2001

PATENT APPLICATION: US/09/759,130A

TIME: 13:00:32

Input Set : A:\10147-61.app

Output Set: N:\CRF3\10042001\I759130A.raw

```

1627 Ser Gly Glu Lys Lys Lys Ser Phe Ser Thr Phe Gly Lys Asp Ser Pro
1628 225                               230                235                240
1630 Ser Glu Met Ser Ser Val Phe Gln Arg Leu Leu Pro Pro Ser Leu Asp
1631                               245                250                255
1633 Thr Asn Cys Gly Pro Pro Leu Gly Thr His Ser Ser Val Gln Pro Ser
1634                               260                265                270
1636 His Glu Leu Met Asp Ala Ser Glu Leu Val Ala Glu Ile Asn Lys Leu
1637                               275                280                285
1639 Leu Gln Asp Val Arg Gln Ser
E--> 1640 290                               295 ←
1762 <210> SEQ ID NO: 42
1763 <211> LENGTH: (1183) 1135 (p. 8)
1764 <212> TYPE: PRT
1765 <213> ORGANISM: Mus sp.
1767 <400> SEQUENCE: 42
1768 Met Met Leu Leu Leu Pro Phe Leu Leu Gly Leu Leu Gly Pro Gly Ser
1769 1                               5                10                15
1771 Tyr Leu Phe Ile Ser Gly Asp Cys Gln Glu Val Ala Thr Val Met Val
1772                               20                25                30
1774 Lys Phe Gln Val Thr Glu Glu Val Pro Ser Gly Thr Val Ile Gly Lys
1775                               35                40                45
1777 Asp Ala Phe Gln Ile Leu Gln Leu Pro Gln Ala Leu Pro Val Gln Met
1778 50                               55                60
1780 Asn Ser Glu Asp Gly Leu Leu Ser Thr Ser Ser Arg Leu Asp Arg Glu
1781 65                               70                75                80
1783 Lys Leu Cys Arg Gln Glu Asp Pro Cys Leu Val Ser Phe Asp Val Leu
1784                               85                90                95
1786 Ala Thr Gly Ala Ser Ala Leu Ile His Val Glu Ile Gln Val Leu Asp
1787 100                              105                110
1789 Ile Asn Asp His Gln Pro Gln Phe Pro Lys Asp Glu Gln Glu Leu Glu
1790 115                              120                125
1792 Ile Ser Glu Ser Ala Ser Leu His Thr Arg Ile Pro Leu Asp Arg Ala
1793 130                              135                140
1795 Leu Asp Gln Asp Thr Gly Pro Asn Ser Leu Tyr Ser Tyr Ser Leu Ser
1796 145                              150                155                160
1798 Pro Ser Glu His Phe Ala Leu Asp Val Ile Val Gly Pro Asp Glu Thr
1799                               165                170                175
1801 Lys His Ala Glu Leu Val Val Val Lys Glu Leu Asp Arg Glu Leu His
1802                               180                185                190
1804 Ser Tyr Phe Asp Leu Val Leu Thr Ala Tyr Asp Asn Gly Asn Pro Pro
1805 195                              200                205
1807 Lys Ser Gly Ile Ser Val Val Lys Val Asn Val Leu Asp Ser Asn Asp
1808 210                              215                220
1810 Asn Ser Pro Val Phe Ala Glu Ser Ser Leu Ala Leu Glu Ile Pro Glu
1811 225                              230                235                240
1813 Asp Thr Val Pro Gly Thr Leu Leu Ile Asn Leu Thr Ala Thr Asp Pro
1814                               245                250                255
1816 Asp Gln Gly Pro Asn Gly Glu Val Glu Phe Phe Phe Gly Lys His Val
1817                               260                265                270

```

RAW SEQUENCE LISTING

DATE: 10/04/2001

PATENT APPLICATION: US/09/759,130A

TIME: 13:00:32

Input Set : A:\10147-61.app

Output Set: N:\CRF3\10042001\I759130A.raw

```

1819 Ser Pro Glu Val Met Asn Thr Phe Gly Ile Asp Ala Lys Thr Gly Gln
1820           275           280           285
1822 Ile Ile Leu Arg Gln Ala Leu Asp Tyr Glu Lys Asn Pro Ala Tyr Glu
1823           290           295           300
1825 Val Asp Val Gln Ala Arg Asp Leu Gly Pro Asn Ser Ile Pro Gly His
1826 305           310           315           320
1828 Cys Lys Val Leu Ile Lys Val Leu Asp Val Asn Asp Asn Ala Pro Ser
1829           325           330           335
1831 Ile Leu Ile Thr Trp Ala Ser Gln Thr Ser Leu Val Ser Glu Asp Leu
1832           340           345           350
1834 Pro Arg Asp Ser Phe Ile Ala Leu Val Ser Ala Asn Asp Leu Asp Ser
1835           355           360           365
1837 Gly Asn Asn Gly Leu Val His Cys Trp Leu Asn Gln Glu Leu Gly His
1838           370           375           380
1840 Phe Arg Leu Lys Arg Thr Asn Gly Asn Thr Tyr Met Leu Leu Thr Asn
1841 385           390           395           400
1843 Ala Thr Leu Asp Arg Glu Gln Trp Pro Ile Tyr Thr Leu Thr Val Phe
1844           405           410           415
1846 Ala Gln Asp Gln Gly Pro Gln Pro Leu Ser Ala Glu Lys Glu Leu Gln
1847           420           425           430
1849 Ile Gln Val Ser Asp Val Asn Asp Asn Ala Pro Val Phe Glu Lys Ser
1850           435           440           445
1852 Arg Tyr Glu Val Ser Thr Trp Glu Asn Asn Pro Pro Ser Leu His Leu
1853           450           455           460
1855 Ile Thr Leu Lys Ala His Asp Ala Asp Leu Gly Ser Asn Gly Lys Val
1856 465           470           475           480
1858 Ser Tyr Arg Ile Lys Asp Ser Pro Val Ser His Leu Val Ile Ile Asp
1859           485           490           495
1861 Phe Glu Thr Gly Glu Val Thr Ala Gln Arg Ser Leu Asp Tyr Glu Gln
1862           500           505           510
1864 Met Ala Gly Phe Glu Phe Gln Val Ile Ala Glu Asp Arg Gly Gln Pro
1865           515           520           525
1867 Gln Leu Ala Ser Ser Ile Ser Val Trp Val Ser Leu Leu Asp Ala Asn
1868           530           535           540
1870 Asp Asn Ala Pro Glu Val Ile Gln Pro Val Leu Ser Glu Gly Lys Ala
1871 545           550           555           560
1873 Thr Leu Ser Val Leu Val Asn Ala Ser Thr Gly His Leu Leu Leu Pro
1874           565           570           575
1876 Ile Glu Asn Pro Ser Gly Met Asp Pro Ala Gly Thr Gly Ile Pro Pro
1877           580           585           590
1879 Lys Ala Thr His Ser Pro Trp Ser Phe Leu Leu Leu Thr Ile Val Ala
1880           595           600           605
1882 Arg Asp Ala Asp Ser Gly Ala Asn Gly Glu Leu Phe Tyr Ser Ile Gln
1883           610           615           620
1885 Ser Gly Asn Asp Ala His Leu Phe Phe Leu Ser Pro Ser Leu Gly Gln
1886 625           630           635           640
1888 Leu Phe Ile Asn Val Thr Asn Ala Ser Ser Leu Ile Gly Ser Gln Trp
1889           645           650           655
1891 Asp Leu Gly Ile Val Val Glu Asp Gln Gly Ser Pro Ser Leu Gln Thr

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RAW SEQUENCE LISTING

DATE: 10/04/2001

PATENT APPLICATION: US/09/759,130A

TIME: 13:00:32

Input Set : A:\10147-61.app

Output Set: N:\CRF3\10042001\I759130A.raw

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1892          660          665          670
1894 Gln Val Ser Leu Lys Val Val Phe Val Thr Ser Val Asp His Leu Arg
1895          675          680          685
1897 Asp Ser Ala His Glu Pro Gly Val Leu Ser Thr Pro Ala Leu Ala Leu
1898          690          695          700
1900 Ile Cys Leu Ala Val Leu Leu Ala Ile Phe Gly Leu Leu Leu Ala Leu
1901 705          710          715          720
1903 Phe Val Ser Ile Cys Arg Thr Glu Arg Lys Asp Asn Arg Ala Tyr Asn
1904          725          730          735
1906 Cys Arg Glu Ala Glu Ser Ser Tyr Arg His Gln Pro Lys Arg Pro Gln
1907          740          745          750
1909 Lys His Ile Gln Lys Ala Asp Ile His Leu Val Pro Val Leu Arg Ala
1910          755          760          765
1912 His Glu Asn Glu Thr Asp Glu Val Arg Pro Ser His Lys Asp Thr Ser
1913          770          775          780
1915 Lys Glu Thr Leu Met Glu Ala Gly Trp Asp Ser Cys Leu Glu Ala Pro
1916 785          790          795          800
1918 Phe His Leu Thr Pro Thr Leu Tyr Arg Thr Leu Arg Asn Gln Gly Asn
1919          805          810          815
1921 Gln Gly Glu Leu Ala Glu Ser Gln Glu Val Leu Gln Asp Thr Phe Asn
1922          820          825          830
1924 Phe Leu Phe Asn His Pro Arg Gln Arg Asn Ala Ser Arg Glu Asn Leu
1925          835          840          845
1927 Asn Leu Pro Glu Ser Pro Pro Ala Val Arg Gln Pro Leu Leu Arg Pro
1928          850          855          860
1930 Leu Lys Val Pro Gly Ser Pro Ile Ala Arg Ala Thr Gly Asp Gln Asp
1931 865          870          875          880
1933 Lys Glu Glu Ala Pro Gln Ser Pro Pro Ala Ser Ser Ala Thr Leu Arg
1934          885          890          895
1936 Arg Gln Arg Asn Phe Asn Gly Lys Val Ser Pro Arg Gly Glu Ser Gly
1937          900          905          910
1939 Pro His Gln Ile Leu Arg Ser Leu Val Arg Leu Ser Val Ala Ala Phe
1940          915          920          925
1942 Ala Glu Arg Asn Pro Val Glu Glu Pro Ala Gly Asp Ser Pro Pro Val
1943          930          935          940
1945 Gln Gln Ile Ser Gln Leu Leu Ser Leu Leu His Gln Gly Gln Phe Gln
1946 945          950          955          960
1948 Pro Lys Pro Asn His Arg Gly Asn Lys Tyr Leu Ala Lys Pro Gly Gly
1949          965          970          975
1951 Ser Ser Arg Gly Thr Ile Pro Asp Thr Glu Gly Leu Val Gly Leu Lys
1952          980          985          990
1954 Pro Ser Gly Gln Ala Glu Pro Asp Leu Glu Glu Gly Pro Pro Ser Pro
1955          995          1000          1005
1957 Leu Ser Ser Leu Leu Asp Pro Asn Thr Gly Leu Ala Leu Asp Lys Leu
1958          1010          1015          1020
1960 Ser Pro Pro Asp Pro Ala Trp Met Ala Arg Leu Ser Leu Pro Leu Thr
1961 1025          1030          1035          1040
1963 Ser Glu Glu Pro Arg Thr Phe Gln Thr Phe Gly Lys Thr Val Gly Pro
1964          1045          1050          1055

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RAW SEQUENCE LISTING

DATE: 10/04/2001

PATENT APPLICATION: US/09/759,130A

TIME: 13:00:32

Input Set : A:\10147-61.app

Output Set: N:\CRF3\10042001\I759130A.raw

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1966 Gly Pro Glu Leu Ser Pro Thr Gly Thr Arg Leu Ala Ser Thr Phe Val
1967          1060          1065          1070
1969 Ser Glu Met Ser Ser Leu Leu Glu Met Leu Leu Gly Gln His Thr Val
1970          1075          1080          1085
1972 Pro Val Glu Ala Ala Ser Ala Ala Leu Arg Arg Leu Ser Val Cys Gly
1973          1090          1095          1100
1975 Arg Thr Leu Ser Leu Asp Leu Ala Thr Ser Gly Ala Ser Ala Ser Glu
1976 1105          1110          1115          1120
1978 Ala Gln Gly Arg Lys Lys Ala Ala Glu Ser Arg Leu Gly Cys Gly
E--> 1979          1125          1130          1135 ←

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→ Use of n and/or Xaa has been detected in the Sequence Listing.
 Review the Sequence Listing to insure a corresponding
 explanation is presented in the <220> to <223> fields of
 each sequence using n or Xaa.

VERIFICATION SUMMARY

DATE: 10/04/2001

PATENT APPLICATION: US/09/759,130A

TIME: 13:00:35

Input Set : A:\10147-61.app

Output Set: N:\CRF3\10042001\I759130A.raw

L:20 M:270 C: Current Application Number differs, Replaced Current Application Number
L:21 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:391 M:252 E: No. of Seq. differs, <211>LENGTH:Input:1151 Found:911 SEQ:3
L:859 M:283 W: Missing Blank Line separator, <400> field identifier
L:860 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (9) SEQUENCE:
L:864 M:283 W: Missing Blank Line separator, <400> field identifier
L:865 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (10) SEQUENCE:
L:869 M:283 W: Missing Blank Line separator, <400> field identifier
L:870 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (11) SEQUENCE:
L:874 M:283 W: Missing Blank Line separator, <400> field identifier
L:875 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (12) SEQUENCE:
L:879 M:283 W: Missing Blank Line separator, <400> field identifier
L:880 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (13) SEQUENCE:
L:884 M:283 W: Missing Blank Line separator, <400> field identifier
L:885 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (14) SEQUENCE:
L:889 M:283 W: Missing Blank Line separator, <400> field identifier
L:890 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (15) SEQUENCE:
L:894 M:283 W: Missing Blank Line separator, <400> field identifier
L:895 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (16) SEQUENCE:
L:899 M:283 W: Missing Blank Line separator, <400> field identifier
L:900 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (17) SEQUENCE:
L:904 M:283 W: Missing Blank Line separator, <400> field identifier
L:905 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (18) SEQUENCE:
L:909 M:283 W: Missing Blank Line separator, <400> field identifier
L:910 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (19) SEQUENCE:
L:914 M:283 W: Missing Blank Line separator, <400> field identifier
L:915 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (20) SEQUENCE:
L:919 M:283 W: Missing Blank Line separator, <400> field identifier
L:920 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (21) SEQUENCE:
L:924 M:283 W: Missing Blank Line separator, <400> field identifier
L:925 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (22) SEQUENCE:
L:929 M:283 W: Missing Blank Line separator, <400> field identifier
L:930 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (23) SEQUENCE:
L:934 M:283 W: Missing Blank Line separator, <400> field identifier
L:935 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (24) SEQUENCE:
L:939 M:283 W: Missing Blank Line separator, <400> field identifier
L:940 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (25) SEQUENCE:
L:944 M:283 W: Missing Blank Line separator, <400> field identifier
L:945 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (26) SEQUENCE:
L:949 M:283 W: Missing Blank Line separator, <400> field identifier
L:950 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (27) SEQUENCE:
L:954 M:283 W: Missing Blank Line separator, <400> field identifier
L:955 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (28) SEQUENCE:
L:959 M:283 W: Missing Blank Line separator, <400> field identifier
L:960 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (29) SEQUENCE:
L:964 M:283 W: Missing Blank Line separator, <400> field identifier
L:965 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (30) SEQUENCE:
L:1348 M:283 W: Missing Blank Line separator, <400> field identifier

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L:1349 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (34) SEQUENCE:
L:1570 M:283 W: Missing Blank Line separator, <400> field identifier
L:1571 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (36) SEQUENCE:
L:1575 M:283 W: Missing Blank Line separator, <400> field identifier
L:1576 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (37) SEQUENCE:
L:1640 M:252 E: No. of Seq. differs, <211>LENGTH:Input:423 Found:295 SEQ:38
L:1644 M:283 W: Missing Blank Line separator, <400> field identifier
L:1645 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (39) SEQUENCE:
L:1979 M:252 E: No. of Seq. differs, <211>LENGTH:Input:1183 Found:1135 SEQ:42
L:1983 M:283 W: Missing Blank Line separator, <400> field identifier
L:1984 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (43) SEQUENCE:
L:1988 M:283 W: Missing Blank Line separator, <400> field identifier
L:1989 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (44) SEQUENCE:
L:1993 M:283 W: Missing Blank Line separator, <400> field identifier
L:1994 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (45) SEQUENCE:
L:1998 M:283 W: Missing Blank Line separator, <400> field identifier
L:1999 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (46) SEQUENCE:
L:2003 M:283 W: Missing Blank Line separator, <400> field identifier
L:2004 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (47) SEQUENCE:
L:2008 M:283 W: Missing Blank Line separator, <400> field identifier
L:2009 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (48) SEQUENCE:
L:2013 M:283 W: Missing Blank Line separator, <400> field identifier
L:2014 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (49) SEQUENCE:
L:2018 M:283 W: Missing Blank Line separator, <400> field identifier
L:2019 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (50) SEQUENCE:
L:2428 M:283 W: Missing Blank Line separator, <400> field identifier
L:2429 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (62) SEQUENCE:
L:2433 M:283 W: Missing Blank Line separator, <400> field identifier
L:2434 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (63) SEQUENCE:
L:2438 M:283 W: Missing Blank Line separator, <400> field identifier
L:2439 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (64) SEQUENCE:
L:2443 M:283 W: Missing Blank Line separator, <400> field identifier
L:2444 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (65) SEQUENCE:
L:2448 M:283 W: Missing Blank Line separator, <400> field identifier
L:2449 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (66) SEQUENCE:
L:2453 M:283 W: Missing Blank Line separator, <400> field identifier
L:2454 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (67) SEQUENCE:
L:2458 M:283 W: Missing Blank Line separator, <400> field identifier
L:2459 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (68) SEQUENCE:
L:2463 M:283 W: Missing Blank Line separator, <400> field identifier
L:2464 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (69) SEQUENCE:
L:2468 M:283 W: Missing Blank Line separator, <400> field identifier
L:2469 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (70) SEQUENCE:
L:3032 M:283 W: Missing Blank Line separator, <400> field identifier
L:3033 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (79) SEQUENCE:
L:3037 M:283 W: Missing Blank Line separator, <400> field identifier
L:3038 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (80) SEQUENCE:
L:3113 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:81
L:3113 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:81

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L:3114 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:81
L:3114 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:81
L:3283 M:283 W: Missing Blank Line separator, <400> field identifier
L:3284 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (87) SEQUENCE:
L:3331 M:283 W: Missing Blank Line separator, <400> field identifier
L:3332 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (89) SEQUENCE:
L:3336 M:283 W: Missing Blank Line separator, <400> field identifier
L:3337 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (90) SEQUENCE:
L:3411 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:91
L:3411 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:91
L:3412 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:91
L:3412 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:91
L:3604 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:96
L:3604 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:96
L:3605 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:96
L:3605 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:96
L:3790 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:101
L:3790 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:101
L:3791 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:101
L:3791 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:101
L:3972 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:106
L:3972 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:106
L:3973 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:106
L:3973 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:106
L:4150 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:111
L:4150 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:111
L:4151 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:111
L:4151 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:111
L:4253 M:283 W: Missing Blank Line separator, <400> field identifier
L:4254 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (116) SEQUENCE:
L:4258 M:283 W: Missing Blank Line separator, <400> field identifier
L:4259 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (117) SEQUENCE:
L:9840 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:324
L:9840 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:324
L:11213 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:343
L:11213 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:343
L:16904 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:450
L:16904 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:450
L:16904 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:450
L:16951 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:451
L:16951 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:451
L:16951 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:451
L:16983 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:452
L:16983 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:452
L:16983 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:452
L:17009 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:453
L:17009 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:453
L:17009 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:453
L:17036 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:454

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L:17036 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:454
L:17036 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:454
L:17039 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:454
L:17039 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:454
L:17039 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:454
L:17042 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:454
L:17042 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:454
L:17042 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:454
L:17062 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:455
L:17062 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:455
L:17062 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:455
L:17083 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:456
L:17083 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:456
L:17083 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:456
L:17086 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:456
L:17086 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:456
L:17086 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:456
L:17089 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:456
L:17089 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:456
L:17089 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:456
L:17124 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:457
L:17124 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:457
L:17124 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:457
L:17127 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:457
L:17127 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:457
L:17127 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:457